

	A	B	C	D	E	F	G	H	I	J	K	L
1	User Selected Options			Background Statistics for Data Sets with Non-Detects								
2												
3	Date/Time of Computation			7/30/2013 2:43:07 PM								
4	From File			WorkSheet.xls								
5	Full Precision			OFF								
6	Confidence Coefficient			95%								
7	Coverage			95%								
8	rent or Future K Observations			1								
9	mber of Bootstrap Operations			2000								
10												
11	PCB											
12												
13	General Statistics											
14	Total Number of Observations				29		Number of Distinct Observations				29	
15	Minimum				0.598		First Quartile				2.243	
16	Second Largest				6.865		Median				3.079	
17	Maximum				7.811		Third Quartile				3.922	
18	Mean				3.368		SD				1.949	
19	Coefficient of Variation				0.578		Skewness				0.691	
20	Mean of logged Data				1.031		SD of logged Data				0.655	
21												
22	Critical Values for Background Threshold Values (BTVs)											
23	Tolerance Factor K (For UTL)				2.232		d2max (for USL)				2.73	
24												
25	Normal GOF Test											
26	Shapiro Wilk Test Statistic				0.921		Shapiro Wilk GOF Test					
27	5% Shapiro Wilk Critical Value				0.926		Data Not Normal at 5% Significance Level					
28	Lilliefors Test Statistic				0.171		Lilliefors GOF Test					
29	5% Lilliefors Critical Value				0.165		Data Not Normal at 5% Significance Level					
30	Data Not Normal at 5% Significance Level											
31												
32	Background Statistics Assuming Normal Distribution											
33	95% UTL with		95% Coverage		7.718		90% Percentile (z)				5.866	
34			95% UPL (t)		6.74		95% Percentile (z)				6.573	
35			95% USL		8.688		99% Percentile (z)				7.901	
36												
37	Gamma GOF Test											
38	A-D Test Statistic				0.424		Anderson-Darling Gamma GOF Test					
39	5% A-D Critical Value				0.753		ected data appear Gamma Distributed at 5% Significance Lev					
40	K-S Test Statistic				0.102		Kolmogrov-Smirnoff Gamma GOF Test					
41	5% K-S Critical Value				0.164		ected data appear Gamma Distributed at 5% Significance Lev					
42	Detected data appear Gamma Distributed at 5% Significance Level											
43												
44	Gamma Statistics											
45	k hat (MLE)				2.875		k star (bias corrected MLE)				2.601	
46	Theta hat (MLE)				1.172		Theta star (bias corrected MLE)				1.295	
47	nu hat (MLE)				166.8		nu star (bias corrected)				150.8	
48	MLE Mean (bias corrected)				3.368		MLE Sd (bias corrected)				2.089	
49												
50	Background Statistics Assuming Gamma Distribution											
51	95% Wilson Hilferty (WH) Approx. Gamma UPL				7.527		90% Percentile				6.167	
52	95% Hawkins Wixley (HW) Approx. Gamma UPL				7.736		95% Percentile				7.37	
53	95% WH Approx. Gamma UTL with		95% Coverage		9.396		99% Percentile				9.998	
54	95% HW Approx. Gamma UTL with		95% Coverage		9.847							
55			95% WH USL		11.53		95% HW USL				12.34	
56												
57	Lognormal GOF Test											
58	Shapiro Wilk Test Statistic				0.948		Shapiro Wilk Lognormal GOF Test					
59	5% Shapiro Wilk Critical Value				0.926		Data appear Lognormal at 5% Significance Level					
60	Lilliefors Test Statistic				0.126		Lilliefors Lognormal GOF Test					
61	5% Lilliefors Critical Value				0.165		Data appear Lognormal at 5% Significance Level					
62	Data appear Lognormal at 5% Significance Level											

	A	B	C	D	E	F	G	H	I	J	K	L
63												
64	Background Statistics assuming Lognormal Distribution											
65	95% UTL with 95% Coverage				12.1					90% Percentile (z)	6.491	
66	95% UPL (t)				8.71					95% Percentile (z)	8.236	
67	95% USL				16.77					99% Percentile (z)	12.87	
68												
69	Nonparametric Distribution Free Background Statistics											
70	Data appear Gamma Distributed at 5% Significance Level											
71												
72	Nonparametric Upper Limits for Background Threshold Values											
73	Order of Statistic, r				29	95% UTL with 95% Coverage				7.811		
74	Approximate f				1.526	Confidence Coefficient (CC) achieved by UTL				0.774		
75	95% Percentile Bootstrap UTL with 95% Coverage				7.811	95% BCA Bootstrap UTL with 95% Coverage				7.811		
76	95% UPL				7.338	90% Percentile				6.185		
77	90% Chebyshev UPL				9.314	95% Percentile				6.624		
78	95% Chebyshev UPL				12.01	99% Percentile				7.546		
79	95% USL				7.811							
80												
81	Note: The use of USL to estimate a BTV is recommended only when the data set represents a background											
82	data set free of outliers and consists of observations collected from clean unimpacted locations.											
83	The use of USL tends to provide a balance between false positives and false negatives provided the data											
84	represents a background data set and when many onsite observations need to be compared with the BTV.											
85												